



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,991	10/21/2003	Tadayoshi Kawaguchi	500.41295VX1	4207
20457	7590	10/18/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			HOANG, TU BA	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/688,991

Applicant(s)

KAWAGUCHI ET AL.

Examiner

Tu Ba Hoang

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/03, 3/04, 9/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 2 (noted on page 5), 1 (noted on page 6), 9 (noted on page 7). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, there is insufficient antecedent basis for "the processing" recited at line 5 in the claim. Such "processing" must also be clearly defined. The phrase "...using an antenna and a Faraday shield which are provided at outer periphery of the vacuum vessel and **to which** a high-frequency electric power can be applied,..." recited at lines 3-4 renders the claim indefinite because it is unclear for what "to which" being referred to. Does "to which" include the antenna, the faraday shield and the vacuum vessel, or just the antenna, or just the faraday shield, or only the antenna and the faraday shield, or in other combinations? Clarification is needed.

Claims 2, 6, and 7 are indefinite as for the same reason set forth in claim 1 above noting the phrases "the processing" and "to which".

Additionally, in claim 6, the phrase "comprises" recited at line 1 is used to indicate that all of the recitation of "supplying..." (line 1), "producing..." (line 2) which are considered positive claimed steps of the method. However, in the claim, latter recited "the method comprises the first step of....." (line 5) which leads to confusion whether "comprises supplying.....wherein" (lines 1-5) to be considered as intended use in the preamble or itself is the preamble of the claim. Appropriate corrections are suggested.

Additionally, in claim 7, the term "cleaning" recited at line 6 renders the claim indefinite because it is unclear for which to be cleaned or to do such cleaning. It is suggested (or other appropriate corrections) that the "cleaning" to be replaced by "is cleaned" and the phrase "is carried out" recited at line 7 (after "Faraday shield") to be deleted because it is clear that only the number of foreign matters is needed to be clean. It is noted that claim 7 is intended to be a process claim. However, structural limitations such as "monitor for foreign matters" are not positively recited in term of a positive process step.

Art Unit: 3742

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 7 as being best understood is rejected under 35 U.S.C. 102(b) as being anticipated by Doi et al (JP 2000-323298-A) cited by the Applicants. Doi et al shows a plasma processing apparatus and method thereof (Figure 9) in which a processing gas is supplied by source 4 to a vacuum vessel forming a plasma production part 2a, a plasma is produced by using an antenna 1a or 1b and a Faraday shield 8a provided at the outer periphery of the vacuum vessel, wherein a high-frequency electric power source 10 is for supplying a high-frequency electric power (i.e., voltage) to the antenna and the Faraday shield and any foreign matters in the vacuum vessel can be clean due to the nature operational of the vacuum plasma processing apparatus.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Collins et al (US 6,054,013), Blalock (US 5,647,913), Schneider et al (US 6,308,654), Hirano et al (US 6,084,763) and Masuda et al (US 6,171,438).

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or fairly suggest a voltage in the range of at least 500V to 1500V is applied to the faraday shield in plasma processing system or process.

Claims 1-6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (703) 308-3303. The examiner can normally be reached on Mon-Fri from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tu Ba Hoang  
Primary Examiner  
Art Unit 3742

October 14, 2004